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ABSTRACT

An approach to assessment is described that allows students to understand and help decide the criteria for good work. It is called "negotiable contracting." Negotiable contracting makes assessment a highly individualized process that recognizes the subtly different ways in which students master skills. Students and teachers jointly create a ratings chart called a rubric. The rubric specifically identifies and ranks the criteria for assessing students' performance. Inside the rubric the criteria for each level of achievement are explained in detail, along with the weight to be given to each skill. Students involved in developing a rubric are more clear about the skills they need to master a lesson and how well they are progressing. As added reinforcement of the lesson, students work cooperatively in small groups to try out their ideas. The rankings used in a rubric should be neutral words that avoid the implication of failure inherent in a generalized A-F or numerical grade. The rubric should also have an even number of ratings to eliminate the temptation to award a middle ranking. Along with the rubrics developed for individual lessons, each student's assessment should encompass a look at the progress the student has made during the year. Examples of work should be collected into a portfolio for an end-of-the-year assessment. It is critical to the success of negotiable contracting to have the understanding and support of parents, who are probably more familiar with a traditional grading system. (Contains three tables.) (SLD)

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Creating Rubrics Through Negotiable Contracting and Assessment

by Andi Stix, Ed.D. with Michele Block Morse

Ask middle school students what they dread most about math class and for many, the answer is simple: tests. They'll describe taking exams as a stressful, boring ordeal in which even their best efforts may land them a poor grade. Only afterward do many youngsters realize that they never really understood the lesson.

But what if students were given the opportunity to understand -- and help decide -- the criteria for good work? What if instead of simply adding up right answers on a final exam, a teacher also regularly assessed the strengths and weaknesses of each student's learning process: that is, how each youngster approaches problem-solving. And what if students reinforce their learning by helping to teach one another?

It's an approach called "negotiable contracting" and it is far from subversive. Already adopted by many school systems across the country, negotiable contracting keeps the teacher squarely in charge of the classroom and, ultimately, for assessing students' work. It also recognizes that for rote skills like memorizing multiplication tables, traditional tests and quizzes may be a good tool for assessing student ability.

But when it comes to more creative problem-solving, solutions can be arrived at by different routes. Some paths will be more imaginative, succinct or efficient than others. Each student's chosen methodology will depend on his particular style of learning, including whether he thinks best in spatial, numerical or language terms. Accordingly, negotiable contracting makes assessment a highly individualized process that recognizes the subtly different ways in which students master skills.

Negotiable contracting accomplishes that aim by having students and teacher jointly create a ratings chart called a rubric. The rubric specifically identifies and ranks the criteria for assessing students' performance. The criteria are usually written down one side of the page. For each assignment, choose three to five criteria. The list below are merely sample ideas. Feel free to create your own:

Criteria:
Organization
Logical Process
Mechanics
Use of Diagrams
Succinct Language
Originality
Use of Research
Relevant Use of Information
Coordinates Diagrams, Numbers, and Written Language

The different levels of accomplishment are listed across the top of the page:

	Attempted	Acceptable	Admirable	Awesome

or

	Novice	Apprentice	Proficient	Distinguished

or

	Amateur	Fair	Good	Excellent

Inside the rubric, the criteria for each level of achievement are explained in detail, as well as the weight to be given to each skill. As an example, to take into account multi-modal forms of

expression, the rubric includes an assessment of students' ability to draw, write about and use numbers to solve a problem.

Criteria:	Novice	Apprentice	Proficient	Distinguished
Coordinates Diagrams, Numbers, and Written Language	Includes insufficient connections. Points: 1-2	Some connections are found between two or more modalities. Points: 3-4	Connections are made between most modalities. Points: 5-6	Excellent connections and details are made between all modalities. Points: 7-8

or:

Criteria:	Attempted	Acceptable	Admirable	Awesome
Organization in Problem Solving Strategies	Illogical organization of ideas. No evidence of problem solving strategies. Points: 1-3	Logical organization is found; however it is not fully developed. Task is defined and answered. Points: 4-6	Organization is clearly developed. Introduction is clearly defined with a logical proof. Points: 7-9	Organization is fully developed with excellent details. Transitions between problem solving steps are superior. Bridges answer to the question in a strong conclusion. Points: 10-12

Students who are involved in developing a rubric are more clear about what skills they need to master a lesson and how well they are progressing. They develop greater confidence in their abilities and the incentive to push on when they run into difficulties. As added reinforcement of the lesson, students work cooperatively in small groups of two or four youngsters to try out and critique their ideas. Ultimately, those students achieve a deeper level of understanding that allows them consistently, and confidently, to solve problems on their own.

Creating rooms and rating solutions with the rubric

Sound complicated? It's not. Let's look at possible middle school lesson involving the computation of area: Students are asked to create a usable room of 150 square feet. What possible dimensions could the room be and why would some dimensions be less practical than others? (It's assumed the class already has learned to multiply.)

The first step is for teacher and students to create an individualized rubric that will function as a "report card" for that lesson. For this particular problem, there might be two rubrics. The first rubric might assess the work product itself: Is it easy to follow? Does it follow a logical order, or does it ramble? Does it demonstrate clear conceptual understanding? Would the answer work in real life? The second rubric might address behavioral aspects of group problem solving: Did the student: listen well? work cooperatively? share materials? A teacher might also opt to create a single rubric that addresses both aspects of student performance.

Because middle school students tend to gel as a class, displaying certain common strengths and weaknesses, a rubric for the same math lesson may need to be tailored slightly from class to class. The teacher has the final word on what goes in the rubric.

For example, the instructor may know that the students in his morning math class are good at taking turns, so that working cooperatively would not be a priority lesson goal. If those students tended to have a problem with talking too much, the teacher might decide to emphasize listening skills in the rubric instead. The rubric for the same lesson will differ slightly for another class, where the students may have problems working cooperatively but have other strengths.

Assigning a grade.

The rankings used in a rubric should be neutral words that avoid the implication of failure inherent in a generalized A-F or numerical grade. The rubric also should be designed with an even number of ratings, perhaps four, in order to eliminate the natural temptation of

instructors -- as well as students -- to award a middle ranking. For example, in a ranking system of 1-5, 3 tends to be used as a neutral territory.

The State of Kentucky utilizes four non-pejorative ratings for each criteria in a rubric: "novice;" "apprentice;" "proficient;" and "distinguished." Let's look at how the ratings would be assessment for the criterion of "conceptual understanding."

"Novice" might be defined as a student who knows little: in trying to create different rooms of 150-square-feet in area, for example, he is only beginning to make the connection that length and width can be represented by numbers and multiplied to determine area. An "apprentice" rating implies a beginning of conceptual understanding: perhaps the student knows how to compute area, but doesn't understand that different room measurements can be used to total the same area. "Proficient" signals a clear conceptual understanding: that the student can create dimensions for several different rooms. "Distinguished" means, as it sounds, outstanding work: this student understands all possible solutions to the problem and can conceptualize which one would be most practical in real life.

Other rubrics use other rating terms, such as "attempted," "accepted," "admirable," or "awesome." The students and the teacher can decide on the terminology themselves. In addition, it's helpful for the students to be shown examples of the kind of work that will qualify for each ranking in the rubric (using a different problem). Later, they will have a clear understanding of how their own work was assessed.

As a manageable parameter for students, try to use three to five criteria for each task. First discuss the problem with the students and negotiate together the criteria that would make sense for that task. Not only does this process create an environment of respect and negotiation, but students feel a sense of ownership. Let's take the examples of the rubrics from the beginning of the article and group it with the 150-square foot problem to see how it would look:

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Lesson: 150 Square Feet

Criteria:	Novice Points: 3-9	Apprentice Points: 12-18	Proficient Points: 21-27	Distinguished Points: 30-36
Coordinates Diagrams, Numbers, and Written Language	Includes insufficient connections. Points: 1-2	Some connections are found between two or more modalities. Points: 3-4	Connections are made between most modalities. Points: 5-6	Excellent connections and details are made between all modalities. Points: 7-8
Organization in Problem Solving Strategies	Illogical organization of ideas. No evidence of problem solving strategies. Points: 1-3	Logical organization is found; however it is not fully developed. Task is defined and answered. Points: 4-6	Organization is clearly developed. Introduction is clearly defined with a logical proof. Points: 7-9	Organization is fully developed with excellent details. Transitions between problem solving steps are superior. Bridges answer to the question in a strong conclusion. Points: 10-12
Conceptual Understanding	Makes little , if any, connection that length and width are multiplied to determine area Points: 1-4	Student knows how to compute area. Does not presents multiple solutions needed for judgment. Points: 5-8	Student creates dimensions for several different rooms. Points: 9-12	Student demonstrates all possible solutions and determines which one is most practical in real life. Points: 13-16

End of year assessment

Along with the rubrics developed for individual lessons, each student's assessment should encompass an overall look at how far the student has come during the year and what his weaknesses are. Ideally, the student himself should play an important role. For example, throughout the year the teacher periodically might ask students to select lessons they have found

particularly significant and explain, in writing, why. A student might choose a lesson that functioned as a benchmark in his understanding, or one that he found particularly interesting or challenging. As an alternative, the teacher might ask a student to choose three examples of his best work -- and one that he considered substandard -- and explain why he made those choices.

The examples of student's work are then collected into a portfolio for an end -of-year assessment. The portfolio demonstrates vividly for teacher, student and parents alike how the youngster's thinking has evolved over the course of the school year.

It's critical to the success of negotiable contracting to have the understanding and involvement of parents, who are very likely more familiar with a traditional grading system. Meeting with parents at the beginning of the school year is helpful and, in many cases, offers teachers new ideas and a valuable perspective on parents' priorities.